

Amendments to the Claims under Revised 37 C.F.R. § 1.121

Claim 1 (currently amended): An isolated nucleic acid molecule comprising:

- (a) the nucleotide sequence as set forth in any of SEQ ID NO: 1, SEQ ID NO: 3, or SEQ ID NO: 5;
- (b) a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6; or
- (c) a nucleotide sequence that is complementary to the nucleotide sequence of either (a) or (b).

Claim 2 (currently amended): An isolated nucleic acid molecule comprising:

- (a) a region of the nucleotide sequence of any of SEQ ID NO: 1, SEQ ID NO: 3, or SEQ ID NO: 5 encoding a polypeptide fragment of at least about 25 amino acid residues, ~~wherein the polypeptide fragment has an activity of a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6, or is antigenic;~~
- (b) a region of the nucleotide sequence of any of SEQ ID NO: 1, SEQ ID NO: 3, or SEQ ID NO: 5, ~~or the nucleotide sequence of (a),~~ comprising a fragment of at least about 16 nucleotides; or
- (c) a nucleotide sequence that is complementary to the nucleotide sequence of either (a) or (b).

Claim 3 (currently amended): An isolated nucleic acid molecule comprising:

- (a) a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 ~~with~~ having at least one conservative amino acid substitution, wherein the ~~encoded polypeptide has an activity of a~~ having at least one conservative amino acid substitution is at least about 70 percent identical to the polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6;
- (b) ~~—a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 with at least one amino acid insertion, wherein the encoded polypeptide has an activity of a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or~~

SEQ ID NO: 6;

(e) ~~a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 with at least one amino acid deletion, wherein the encoded polypeptide has an activity of a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6;~~

(d)(b) a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 ~~which has~~ having a C- and/or N- terminal truncation, wherein the ~~encoded polypeptide has an activity of a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6~~ having a C- and/or N- terminal truncation comprises at least about 25 amino acid residues;

(e)(c) a nucleotide sequence encoding a polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 ~~with~~ having at least one modification that is a conservative amino acid substitution, ~~an amino acid insertion, an amino acid deletion, C-terminal truncation, or N-terminal truncation,~~ wherein the ~~encoded polypeptide has an activity of a~~ having at least one modification is at least about 70 percent identical to the polypeptide as set forth in any of SEQ ID NO: 2, SEQ ID NO: 4, or SEQ ID NO: 6 and comprises at least about 25 amino acid residues;

(f)(d) a nucleotide sequence of any of (a) - (e)(c) comprising a fragment of at least about 16 nucleotides; or

(g)(e) a nucleotide sequence that is complementary to the nucleotide sequence of any of (a) - (f)(d).

Claim 4 (previously presented): A vector comprising the nucleic acid molecule of any of Claims 1, 2, or 3.

Claim 5 (original): A host cell comprising the vector of Claim 4.

Claim 6 (original): The host cell of Claim 5 that is a eukaryotic cell.

Claim 7 (original): The host cell of Claim 5 that is a prokaryotic cell.

Claim 8 (currently amended): A process of producing a ~~B7-like~~ polypeptide encoded by the nucleic acid molecule of any of Claims 1, 2, or 3, comprising culturing the host cell of Claim 5 under suitable conditions to express the polypeptide, and optionally isolating the polypeptide from the culture.

Claim 9 (cancelled).

Claim 10 (currently amended): The process of Claim 8, wherein the nucleic acid molecule comprises promoter DNA other than the promoter DNA for the native ~~B7-like polypeptide gene~~ operatively linked to the ~~DNA encoding the B7-like polypeptide~~ nucleic acid molecule.

Claim 11 (currently amended): The isolated nucleic acid molecule according to Claim ~~[[2]]~~3, wherein the percent identity is determined using a computer program that is GAP, BLASTN, FASTA, BLASTA, BLASTX, BestFit, or the Smith-Waterman algorithm.

Claim 12-47 (cancelled).

Claim 48 (previously presented): A viral vector comprising the nucleic acid molecule of any of Claims 1, 2, or 3.

Claim 49-56 (cancelled).

Claim 57 (previously presented): The nucleic acid molecule of any of Claims 1, 2, or 3 attached to a solid support.

Claim 58 (previously presented): An array of nucleic acid molecules comprising at least one nucleic acid molecule of any of Claims 1, 2, or 3.

Claim 59 (currently amended) An isolated nucleic acid molecule comprising:

~~the residue at positions 60, 159, 179, 250, and 385 is either valine or leucine;~~
~~the residue at positions 101, 215, 295, and 369 is either arginine or glutamine;~~
~~the residue at position 114 is either tyrosine or phenylalanine;~~
~~the residue at position 135 is either asparagine or glycine;~~
~~the residue at positions 202, 345, and 359 is either lysine or glutamine;~~
~~the residue at position 239 is either serine or alanine;~~
~~the residue at position 254 is either methionine or leucine;~~
~~the residue at positions 280 and 338 is either cysteine or alanine;~~
~~the residue at positions 5-18, 27, 28, 32, 53, 54, 61-64, 70, 74-76, 78-82, 84, 87, 91, 99, 109,~~
~~110, 122, 124, 127, 139, 143-146, 149, 158, 160, 167-170, 173-178, 183, 187, 188, 197, 198, 200,~~
~~204, 207, 216, 218, 221, 235, 236, 238, 244, 245, 247, 249, 252, 257-261, 263, 265, 266, 281-293,~~
~~296-303, 306, 307, 310-312, 315, 318, 321, 325, 329, 340, 342, 347, 351, 352, 354, 356-358, 361,~~
~~363, 370, 373, 381, and 383 may be is any naturally occurring amino acid; and~~

~~the residue positions 1-4, 223-234, 270-278, 349, and 350 may be any naturally occurring amino acid or may be absent; or~~

wherein the glutamic acid residue at any of positions 15, 89, or 374 may be substituted with a glutamine residue;

the valine residue at any of positions 16, 127, or 242 may be substituted with an isoleucine residue;

the glutamine residue at position 30 may be substituted with a glutamic acid residue;

the arginine residue at any of positions 32, 104, or 356 may be substituted with a histidine residue;

the serine residue at either position 38 or 362 may be substituted with a threonine residue;

the glutamine residue at position 39 may be substituted with a histidine residue;

the isoleucine residue at position 44 may be substituted with a leucine residue;

the alanine residue at either position 47 or 129 may be substituted with a threonine residue;

the valine residue at any of positions 56, 175, or 381 may be substituted with a leucine residue;

the methionine residue at either position 83 or 250 may be substituted with a leucine residue;

the isoleucine residue at any of positions 96, 177, or 210 may be substituted with a valine residue;

the arginine residue at either position 97 or 211 may be substituted with a glutamine residue;

the tyrosine residue at position 110 may be substituted with a phenylalanine residue;

the threonine residue at any of positions 112, 216, or 249 may be substituted with a serine residue;

the asparagine residue at position 131 may be substituted with a glycine residue;

the leucine residue at either position 155 or 246 may be substituted with a valine residue;

the lysine residue at position 198 may be substituted with a glutamine residue;

the serine residue at position 235 may be substituted with an alanine residue;

the cysteine residue at either position 276 or 340 may be substituted with an alanine residue;

the glutamine residue at either position 291 or 365 may be substituted with an arginine

residue;

the threonine residue at any of positions 301, 323, or 324 may be substituted with an

alanine residue;

the aspartic acid residue at position 325 may be substituted with a glutamic acid residue;

the glutamine residue at either position 341 or 355 may be substituted with a lysine

residue; or

the leucine residue at position 370 may be substituted with an isoleucine residue; or

(b) a nucleotide sequence that is complementary to the nucleotide sequence of (a).